

**NOXIOUS WEED MANAGEMENT PLAN**  
FOR  
**FREMONT COUNTY, CO**  
*INCLUDING CITY OF CANON CITY AND CITY OF FLORENCE*

**I. Introduction**

Noxious weeds present a variety of concerns including decreased crop and forage production, soil erosion, and toxicity to wildlife, livestock, and people. Noxious weeds are not native to the United States and, therefore, have no natural predators to control them. As a result, noxious weeds can displace native vegetation, reduce habitat for native and endangered species, degrade riparian areas, and decrease property value. These detrimental effects to the natural ecosystem justify the need for creating and implementing a county noxious weed management plan.

**II. Background & History**

Fremont County has had some form of a weed control program since 1989. The efforts over the years have helped control noxious weeds in Fremont and surrounding counties. In accordance with initial species in the 1992 Weed Control Plan, Leafy spurge, Russian knapweed, and Diffuse knapweed were originally the primary targeted weeds. Some control of Canada thistle was also initiated.

Herbicides have been quite effective in limiting the spread and reducing the density of weed infestations. In some areas, however, chemical control efforts have been less successful. Infestations of Leafy spurge and Knapweed growing near streams and in riparian areas present a challenge due to the sensitive nature of their proximity to water. These areas have been targeted for biological control releases and aquatic-safe herbicides have been utilized.

Biological control releases have been conducted each summer since 1991. Some of the releases are as follows: Diffuse knapweed seed head gall flies and stem-boring beetles, Dalmatian Toadflax stem-boring moths and weevils, Leafy Spurge root-feeding flea beetles, and Musk thistle seed-head and stem-boring weevils. Results on Leafy spurge and Musk thistle have been modest. One infestation of Leafy spurge in the Tallahassee Creek drainage has been somewhat effected by the flea beetles. Other areas of Musk thistle have been eliminated by the seed head weevil. Puncturevine weevil and Tamarisk beetle are real success stories throughout the Upper Arkansas basin along major tributaries to the Arkansas River.

One of the key elements of a successful biological control program is monitoring. In the past, Fremont County was fortunate to have the services of the 4-H Entomology Club to monitor insect populations and their effects on weeds. Monitoring will continue to be an integral part of Fremont County's biological weed control program. The Colorado State Insectary personnel and NRCS have contributed to mapping of Tamarisk beetles in Colorado.

Mapping is also a crucial element in a noxious weed control program. Previous mapping efforts have consisted of plotting weed infestations and control activities on existing maps as time allowed, which presented a picture of the task at hand. In 1998 and 1999, U.S. Bureau of Land Management and other agencies mapped the known noxious weeds infestations in Fremont County using the Geographic Positioning System (GPS) and Geographic Information Systems (GIS). These maps could be easily updated, providing an understandable record of vegetative changes over time. In 2010, new mapping technology called MapItFast was purchased and utilized in six counties within the Upper Arkansas Cooperative Weed Management Area, including Fremont and Custer Counties.

### III. Requirements of the Colorado Noxious Weed Act

The Colorado Noxious Weed Act (Colorado Revised Statutes 35-5.5) was originally signed into law in 1991 and amended in 1996 and 2003. Also referred to in the document as the 'ACT', it directs the Board of County Commissioners from each county in the State to adopt a Noxious Weed Management Plan for all unincorporated land within each county (CRS 35-5.5-105). The 'ACT' further directs each Board of County Commissioners to appoint a local Weed Advisory Board whose power and duties are as follows:

*Local advisory boards shall have the power and duty to:*

- a) *Develop a recommended management plan for the integrated management of designated noxious weeds and recommended management criteria for noxious weeds within the area governed by the local government and governments appointing the local advisory board. The management plan shall be reviewed at regular intervals but not less often than once every three years by the local advisory board. The management plan and any amendments made thereto shall be transmitted to the local governing body for approval, modification, or rejection.*
- b) *Declare noxious weeds and any state noxious weeds designated by rule to be subject to integrated management.*
- c) *Recommend to the local governing body that identified landowners be required to submit an individual integrated management plan to manage noxious weeds on their property.*

The Colorado Department of Agriculture has developed rules pertaining to the 1996 'ACT'; and has adopted new rules (119-CR 5) each year since 2003 for the administration and enforcement of the 'ACT'. The most significant changes made to the 'ACT' in 2004 pertain to the classification of noxious weeds into one of several categories (C.R.S.35-5.5-108).

1. **List A:** rare noxious weed species that are subject to eradication wherever detected statewide in order to protect neighboring lands and the state as a whole. All populations of List A species are designated by the commissioner for eradication.
2. **List B:** noxious weed species for which the commissioner, in consultation with the state weed

advisory committee, local governments, and other interested parties, develops and implements state noxious weed management plan designed to stop the continued spread of these species.

**3. List C:** noxious weed species for which the commissioner, in consultation with the state weed advisory committee, local governments, and other interested parties, will develop and implement weed management plans designed to support the efforts of local governing bodies to facilitate more effective, integrated weed management on public and private lands. The goal of such plans will not be to stop the continued spread of these species but to provide additional educational, research and biological control resources to jurisdictions that choose to require management of List C species.

*A list of the current State A-, B-, C-, and Watch-List noxious weed species is attached as addendum "A" to this management plan.*

The 1996 'ACT' allows for cooperative planning and plan administration among counties and municipalities. Additionally, the 'ACT' establishes the position of State Weed Coordinator in the Colorado Department of Agriculture, and creates a State Noxious Weed Management Fund. The Department of Agriculture may make special grants from this fund to local entities for the management of State noxious weeds.

#### **IV. Objectives of this Plan**

The main objective of this plan is to meet requirements of the 1996 'ACT' and its yearly revisions. This plan provides policy and guidance for noxious weed management in Fremont County. This plan is for the use of all landowners and managers, both public and private.

#### **V. Policy Statement**

The Fremont County Weed Management Director and licensed staff will advise landowners of the need for and feasibility of weed control. Only licensed applicators will make chemical recommendations. Private landowners who chose to apply herbicides on their property will be advised to strictly follow the manufacturer's label.

Fremont County Weed Management prefers an integrated approach to weed management. An integrated approach implements cultural, mechanical, biological, and chemical control methods. Utilizing a variety of methods helps prevent chemical-resistant weeds, decreases "bare ground" situations, and allows for weed control efforts to be tailored to each individual site or scenario.

Cultural and Mechanical Control: First and foremost, good land management is always encouraged to prevent an invasion. The key is to create conditions favorable for desirable plants, thus increasing competition for undesirable noxious weeds. Methods include properly timed irrigation, mowing, burning, livestock grazing, plowing, and seeding. When correctly implemented, these methods are effective as control measures as well as preventive measures.

Biological Control: Many noxious weeds become prolific due to the fact that they have no natural predators. The Colorado State Insectary tests insects and pathogens to control invasive species. Care is taken to be sure they will not move to native species or crops. Biological management of noxious weeds will continue to grow as more biological controls are developed. Biological controls are not a valid eradication method when used alone, but can be integrated with other methods of weed control.

Chemical Control: The use of herbicides is expected to remain our most effective tool for managing noxious weeds. Due to a variety of factors, herbicides are often most effective, but can still be used in conjunction with other management methods. Fremont County Weed Management prefers applying selective herbicides using a spot-spraying technique. Spot spraying (when compared to broadcast spraying) is more cost-effective, reduces the amount of herbicide in the environment, and prevents unnecessary damage to surrounding vegetation. Integrated noxious weed management calls for the sensible application of chemical herbicides. According to the policies stated previously, Fremont County Weed Management will use chemical control methods when appropriate.

## **VI. Targeted Weeds**

Weeds covered under this plan are all included in the state noxious weed list designated by rule. In Fremont County, the following twenty noxious weeds will receive priority for control:

### A-List Species:

1. Elongated mustard
2. Giant reed
3. Myrtle spurge
4. Japanese knotweed

### B-List Species:

1. Bouncing Bet
2. Bull thistle
3. Canada thistle
4. Dalmatian toadflax
5. Diffuse knapweed
6. Hoary cress "white top"
7. Houndstongue
8. Leafy spurge
9. Musk Thistle
10. Perennial pepperweed
11. Russian knapweed
12. Russian olive
13. Salt cedar "tamarisk"
14. Scotch thistle
15. Spotted knapweed
16. Yellow toadflax

## **VII. Coordination and Cooperation**

Fremont County Weed Management collaborates with a variety of agencies and landowners. Local, State, and Federal agencies along with researchers, private organizations, interest groups, and land managers often contribute funding, time, labor, and expertise to create large scale weed management efforts.

In Fremont County, partners include:

- Bureau of Land Management
- Cañon City Metropolitan Area Recreation and Park District
- City of Cañon City
- City of Florence
- Colorado Department of Agriculture
- Colorado Department of Transportation
- Colorado Parks and Wildlife
- Colorado State Land Board
- Colorado State University
- Colorado Weed Management Association
- CSU Extension
- Fremont Conservation District
- Natural Resources Conservation Service
- School Districts
- Irrigation companies
- Landowners and land managers
- Upper Arkansas Cooperative Weed Management Area
- U.S. Fish and Wildlife Service
- U.S. Forest Service

## **VIII. Education**

The Weed Management Director and staff will distribute educational materials concerning the identification, propagation, and control of noxious weeds. Various outreach and educational tools will be utilized, such as news releases, presentations, publications and handouts, site evaluations, and weed tours. The “Guideline for Weed Management Plans” (April 2010) and “Weed Management Preferences” (October 2011) are available for education-related activities.

## **IX. Monitoring and Mapping**

Tracking the invasion and control of noxious weeds in Fremont County requires an effective system of monitoring. Matching funds were made available to initiate the mapping of noxious weeds. MapItFast technology is utilized throughout the region to develop detailed noxious weed maps, which are updated annually.

## X. Funding

The noxious weed control program in Fremont County is funded by various entities (please refer to the list of cooperators above). Monies are deposited in the county "weed fund" and expenditures are approved by the Fremont County Commissioners. Historically, weed control funds have been generated locally in response to the Colorado Weed Management Act of 1990. Now, the 'ACT' provides for appropriations by the state legislature "for the purpose of funding noxious weed management projects". The Colorado Department of Agriculture is authorized to award grants from these funds to local weed control agencies. The Weed Management Director, with the consent of the County Commissioners, will apply for such grants (and others) as needed.

## XI. Review and Amendments

The 1996 Colorado Noxious Weed Act requires that local noxious weed management plans be reviewed at least once every three years. Implicit in this language, is that the Weed Advisory Board can conduct reviews and update at any time. The County Commissioners must approve any changes to the Noxious Weed Management Plan.

*In Spring 2007, the Fremont County Board of County Commissioners approved the **Fremont County Management and Control of Noxious Weeds; Priorities and Procedures**. This document outlines the priorities and procedures to be taken to ensure that noxious weeds are controlled on all property within Fremont County. These specific priorities and procedures are in affect and attached to this plan as addendum "B" in its entirety.*

Addendum A: Colorado Noxious Weed List

Colorado Noxious Weeds (including Watch List), effective December 30, 2015

**List A Species (25)**

| <i>Common</i>      | <i>Scientific</i>                     |
|--------------------|---------------------------------------|
| African rue        | ( <i>Peganum harmala</i> )            |
| Bohemian knotweed  | ( <i>Polygonum x bohemicum</i> )      |
| Camelthorn         | ( <i>Alhagi maurorum</i> )            |
| Common crupina     | ( <i>Crupina vulgaris</i> )           |
| Cypress spurge     | ( <i>Euphorbia cyparissias</i> )      |
| Dyer's woad        | ( <i>Isatis tinctoria</i> )           |
| Elongated mustard  | ( <i>Brassica elongata</i> )          |
| Flowering rush     | ( <i>Butomus umbellatus</i> )         |
| Giant knotweed     | ( <i>Polygonum sachalinense</i> )     |
| Giant reed         | ( <i>Arundo donax</i> )               |
| Giant salvinia     | ( <i>Salvinia molesta</i> )           |
| Hairy willow-herb  | ( <i>Epilobium hirsutum</i> )         |
| Hydrilla           | ( <i>Hydrilla verticillata</i> )      |
| Japanese knotweed  | ( <i>Polygonum cuspidatum</i> )       |
| Meadow knapweed    | ( <i>Centaurea nigrescens</i> )       |
| Mediterranean sage | ( <i>Salvia aethiopis</i> )           |
| Medusahead         | ( <i>Taeniatherum caput-medusae</i> ) |
| Myrtle spurge      | ( <i>Euphorbia myrsinites</i> )       |
| Orange hawkweed    | ( <i>Hieracium aurantiacum</i> )      |
| Parrotfeather      | ( <i>Myriophyllum aquaticum</i> )     |
| Purple loosestrife | ( <i>Lythrum salicaria</i> )          |
| Rush skeletonweed  | ( <i>Chondrilla juncea</i> )          |
| Squarrose knapweed | ( <i>Centaurea virgata</i> )          |
| Tansy ragwort      | ( <i>Senecio jacobaea</i> )           |
| Yellow starthistle | ( <i>Centaurea solstitialis</i> )     |

**List B Species (37)**

| <i>Common</i>                     | <i>Scientific</i>                |
|-----------------------------------|----------------------------------|
| Absinth wormwood                  | ( <i>Artemisia absinthium</i> )  |
| Black henbane                     | ( <i>Hyoscyamus niger</i> )      |
| Bouncingbet                       | ( <i>Saponaria officinalis</i> ) |
| Bull thistle                      | ( <i>Cirsium vulgare</i> )       |
| Canada thistle                    | ( <i>Cirsium arvense</i> )       |
| Chinese clematis                  | ( <i>Clematis orientalis</i> )   |
| Common tansy                      | ( <i>Tanacetum vulgare</i> )     |
| Common teasel                     | ( <i>Dipsacus fullonum</i> )     |
| Corn chamomile                    | ( <i>Anthemis arvensis</i> )     |
| Cutleaf teasel                    | ( <i>Dipsacus laciniatus</i> )   |
| Dalmatian toadflax, broad-leaved  | ( <i>Linaria dalmatica</i> )     |
| Dalmatian toadflax, narrow-leaved | ( <i>Linaria genistifolia</i> )  |
| Dame's rocket                     | ( <i>Hesperis matronalis</i> )   |
| Diffuse knapweed                  | ( <i>Centaurea diffusa</i> )     |
| Eurasian watermilfoil             | ( <i>Myriophyllum spicatum</i> ) |
| Hoary cress                       | ( <i>Cardaria draba</i> )        |

|                                    |  |
|------------------------------------|--|
| Houndstongue                       | (Cynoglossum officinale)                               |
| Jointed goatgrass                  | (Aegilops cylindrica)                                  |
| Leafy spurge                       | (Euphorbia esula)                                      |
| Mayweed chamomile                  | (Anthemis cotula)                                      |
| Moth mullein                       | (Verbascum blattaria)                                  |
| Musk thistle                       | (Carduus nutans)                                       |
| Oxeye daisy                        | (Leucanthemum vulgare)                                 |
| Perennial pepperweed               | (Lepidium latifolium)                                  |
| Plumeless thistle                  | (Carduus acanthoides)                                  |
| Russian knapweed                   | (Acroptilon repens)                                    |
| Russian-olive                      | (Elaeagnus angustifolia)                               |
| Salt cedar                         | (Tamarix chinensis, T. parviflora, and T. ramosissima) |
| Scentless chamomile                | (Tripleurospermum perforata)                           |
| Scotch thistle                     | (Onopordum acanthium, O. tauricum)                     |
| Spotted knapweed                   | (Centaurea stoebe)                                     |
| Spotted x diffuse knapweed hybrid  | (Centaurea x psammogena = C. stoebe x C. diffusa)      |
| Sulfur cinquefoil                  | (Potentilla recta)                                     |
| Wild caraway                       | (Carum carvi)  |
| Yellow nutsedge                    | (Cyperus esculentus)                                   |
| Yellow toadflax                    | (Linaria vulgaris)                                     |
| Yellow x Dalmatian toadflax hybrid | (Linaria vulgaris x L. dalmatica)                      |

### **List C Species (16)**

| <i>Common</i>        | <i>Scientific</i>      |
|----------------------|------------------------|
| Bulbous bluegrass    | (Poa bulbosa)          |
| Chicory              | (Cichorium intybus)    |
| Common burdock       | (Arctium minus)        |
| Common mullein       | (Verbascum thapsus)    |
| Common St. Johnswort | (Hypericum perforatum) |
| Downy brome          | (Bromus tectorum)      |
| Field bindweed       | (Convolvulus arvensis) |
| Halogeton            | (Halogeton glomeratus) |
| Johnsongrass         | (Sorghum halepense)    |
| Perennial sowthistle | (Sonchus arvensis)     |
| Poison hemlock       | (Conium maculatum)     |
| Puncturevine         | (Tribulus terrestris)  |
| Quackgrass           | (Elymus repens)        |
| Redstem filaree      | (Erodium cicutarium)   |
| Velvetleaf           | (Abutilon theophrasti) |
| Wild proso millet    | (Panicum miliaceum)    |

### **Watch List Species (24)**

| <i>Common</i>                      | <i>Scientific</i>       |
|------------------------------------|-------------------------|
| Asian mustard                      | (Brassica tournefortii) |
| Baby's breath                      | (Gypsophila paniculata) |
| Bathurst burr, Spiny cocklebur     | (Xanthium spinosum)     |
| Brazilian egeria, Brazilian elodea | (Egeria densa)          |



|                                 |  |
|---------------------------------|--|
| Common bugloss                  | ( <i>Anchusa officinalis</i> )                 |
| Common reed                     | ( <i>Phragmites australis</i> )                |
| Garden loosestrife              | ( <i>Lysimachia vulgaris</i> )                 |
| Garlic mustard                  | ( <i>Alliaria petiolata</i> )                  |
| Himalayan blackberry            | ( <i>Rubus armeniacus</i> )                    |
| Japanese blood grass/cogongrass | ( <i>Imperata cylindrica</i> )                 |
| Meadow hawkweed                 | ( <i>Hieracium caespitosum</i> )               |
| Onionweed                       | ( <i>Asphodelus fistulosus</i> )               |
| Purple pampas grass             | ( <i>Cortaderia jubata</i> )                   |
| Scotch broom                    | ( <i>Cytisus scoparius</i> )                   |
| Sericea lespedeza               | ( <i>Lespedeza cuneata</i> )                   |
| Swainsonpea                     | ( <i>Sphaerophysa salsula</i> )                |
| Syrian beancaper                | ( <i>Zygophyllum fabago</i> )                  |
| Water hyacinth                  | ( <i>Eichhornia crassipes</i> )                |
| Water lettuce                   | ( <i>Pistia stratiotes</i> )                   |
| White bryony                    | ( <i>Bryonia alba</i> )                        |
| Woolly distaff thistle          | ( <i>Carthamus lanatus</i> )                   |
| Yellow flag iris                | ( <i>Iris pseudacorus</i> )                    |
| Yellow floatingheart            | ( <i>Nymphoides peltata</i> )                  |
| Yellowtuft                      | ( <i>Alyssum murale</i> , <i>A. corsicum</i> ) |